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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,993	06/11/2001	David Rozenshtein	03433.00025	1837

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WASHINGTON, DC 20001

EXAMINER

BLACK, LINH

ART UNIT	PAPER NUMBER
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2177

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/876,993

Applicant(s)

ROZENSHTAIN ET AL.

Examiner

LINH BLACK

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,6,11,16,21 and 26 is/are allowed.
- 6) ☒ Claim(s) 2-6,8-10,12-15,18-20,22-25 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 7,17 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☒ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 2, 12, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Ganesh et al (USP 6647510).

2. Ganesh et al. anticipated the independent claims 2, 12, and 22 by the following:

storing data in the database; performing a plurality of loads to said database – col. 7, lines 20-46; fig. 4.

undoing one of said plurality of loads wherein, subsequent to step 3, the resulting content of the database reflects the data as if the undone load had not been performed - col. 3, lines 27-33; col. 1, line 62 to col. 2, line 26; col. 8, lines 17-26.

ignoring step 3 wherein, subsequent to step 4, the resulting content of the database reflects the data as if the undone load had been performed –

The limitation "ignoring step 3" indicates there is no "undone one of said plurality of loads" step would be performed. However, the limitation "wherein, subsequent to step 4, the resulting content of the database reflects the data as if the undone load had been performed" seems to contradict with the step 4 itself where the undone load had not been performed because of the ignore step.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5, 8-10, 13-15, 18-20, 23-25, and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Ganesh et al (USP 6647510), and further in view of Jain et al. (USP 5806075).

3. As per claims 3, 13, and 23, Ganesh et al. teach data containers – col. 7, lines 20-45; fig. 7-2. Ganesh et al. do not explicitly suggest load table and target table. Jain et al. teach data replication – col. 5, line 1. Jain et al. also teach storing data in a database and performing a plurality of transactions to the said database – col. 5, lines 34-44; col. 6, lines 8-29. Jain et al. teach undoing at least one of said plurality

of loads – col. 21, lines 49-60. Jain et al. further suggest a target table or a database table – fig. 2c, order or inventory table; col. 6, lines 8-15; load data or data to be transmitted to the database, for example, the customer order data, are in the form of records and fields (figs. 2b-c; col. 4, lines 46-47), are transferred to the database order table. As load data are collected (when customers order items) and sent to the database in rows of fields (by insert, update, delete commands), basically, load data are kept in tables or load tables. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to contain a customer's ordered items in records or a table (or load table) in order to add or update the ordered data to a target table in the database more efficiently, for example, rowids or primary keys of records of items of the load table will indicate which records in a target table to be updated when a customer wants to change the quantity value of his/her order.

4. As per claims 4, 14, and 24, Ganesh et al. teach “undoing at least one of said plurality of loads; wherein the resulting content of the database reflects the data as if the undone load had not been performed” – col. 3, lines 27-33; col. 1, line 62 to col. 2, line 26; col. 8, lines 17-26. Ganesh et al. do not explicitly suggest load table and target table. Jain et al. also teach storing data in a database and performing a plurality of transactions to the said database – col. 5, lines 34-44; col. 6, lines 8-29. Jain et al. further suggest a target table or a database table – fig. 2c, order or inventory table; col. 6, lines 8-15; load data or data to be transmitted to the

database, for example, the customer order data, are in the form of records and fields (figs. 2b-c; col. 4, lines 46-47), are transferred to the database order table. As load data are collected (when customers order items) and sent to the database in rows of fields (by insert, update, delete commands), basically, load data are kept in tables or load tables. Jain et al. teach undoing at least one of said plurality of loads wherein the resulting content of the database reflects the data as if the undone load had not been performed – col. 21, lines 49-60. Jain et al. teach wherein a table structure of a table in a first load is different from a table structure of a table in a second load – figs. 2A-2D1; col. 5, line 34 to col. 6, line 61. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to contain a customer's ordered items in records or a table (or load table) in order to add or update the ordered data to a target table in the database more efficiently, and it is obvious that a table structure in a first load is different from a table structure of a table in a second load because of the modification/updating to the target table such as delete/add records shown in figs. 2D1-2D2, the inventory table of database B.

5. As per claim 5, 15, and 25, Ganesh et al. do not explicitly suggest “database table rows and the load table rows are correlated via a primary key”. Jain et al. teach “rowid information (i.e., identifier specifying a row within a table) is stored in the rowid field” – col. 10, lines 1-2. Jain et al. also teach “find row entry to be updated using primary key value” – fig. 5b1, element 524 and fig. 5c, element 564; fig. 2D2. Thus, it would have been obvious to one of ordinary skill in the art at the time of the

invention to use tables' primary keys to efficiently manipulate data (by insert, update, or delete etc...) within rows of tables.

6. As per claims 8, 18, and 28, Ganesh et al. teach "undoing at least one of said plurality of loads; wherein the resulting content of the database reflects the data as if the undone load had not been performed" – col. 3, lines 27-33; col. 1, line 62 to col. 2, line 26; col. 8, lines 17-26. Ganesh et al. do not explicitly suggest load table and target table. Jain et al. teach a target table or a database table – fig. 2c, order or inventory table; col. 6, lines 8-15; load data or data to be transmitted to the database, for example, the customer order data, are in the form of records and fields (figs. 2b-c; col. 4, lines 46-47), are transferred to the database order table. As load data are collected (when customers order items) and sent to the database in rows of fields (by insert, update, delete commands), basically, load data are kept in tables or load tables. Jain et al. teach undoing at least one of said plurality of loads wherein the resulting content of the database reflects the data as if the undone load had not been performed – col. 21, lines 49-60. Jain et al. teach recording information in a second table, separate from said target table, wherein said information corresponds to each modification made to said target table – fig. 3, transaction table, transaction nodes table; col. 7, lines 37-64. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine Jain et al.'s teaching with Ganesh et al.'s teaching in order to maintain a second table or transaction table

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for capturing/encoding the propagation/modification information to the second database system which allows the data can be accessed or retrieved at any time.

7. As per claims 9-10, 19-20, and 29-30, Ganesh et al. teach reconstructing a load sequence of said target table as it existed just before a load retraction; reconstruct a historical state of said target table at a discrete time in said load sequence, wherein said reconstructing is performed based at least in part on the information in the second table – col. 1, line 62 to col. 2, line 54; col. 6, line 53 to col. 7, line 61; col. 13, lines 15-19; fig. 13.

***Allowable Subject Matter***

8. Claims 1, 6, 11, 16, 21, and 26 are allowed.
9. Claims 7, 17, and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.



**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINH BLACK whose telephone number is 703-305-0317. The examiner can normally be reached on 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Linh Black*

LINH BLACK  
Examiner  
Art Unit 2177

July 1, 2004

  
CRETA ROBINSON  
PRIMARY EXAMINER